DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-029981
Date Inspected: 05-Sep-2013

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	Bernie Docena,Jesse Cayabyab			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

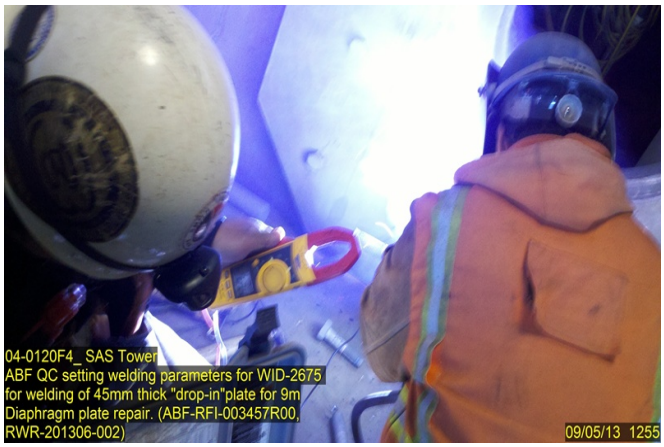
Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) JV job site between the times noted above in order to monitor ABF Quality Control activities and the in process work being performed by ABF production personnel. The following items were observed:

NDT Inspection of Electroslag Welds (ESW)
ESW N-042, Location “J”- Face A:
The QA Inspector observed ABF QC Inspector Jesse Cayabyab performed Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as ESW “J” at face A. Mr. Cayabyab stated that he was instructed by ABF to perform pulse echo UT to document the depths and indications prior to repair (pre-repair verification). The original Y locations were indications identified with pitch/catch UT as rejectable or recordable and designated to be removed and repaired.
Y Location was noted as –1530mm, 1675mm, 3460mm, 3480mm, 3550mm, 3570mm and HAZ areas located 300mm above and below the prosed repair locations.
Please note the inspection is still in process and tandem report for work performed on this date will be completed by QC Inspector Jesse Cayabyab and signed by both QA/QC parties.

ESW Repair excavation
RWR-201308-003
ESW E-043, Location “Q”-Face A:
The QA Inspector was later present to observe ABF welder Donald Plumb (WID-0891) performing Shield Metal Arc Welding (SMAW) on the repair excavation on Electroslag Weld (ESW) “Q”, at face A. The locations and

repair information are listed in Request for Weld Repair (RWR) 201308-003 from Ultrasonic Testing indications designated for repair. The repair locations were noted as:
Y= 3800mm~4300mm
L= 500mm
W= 80mm
D= 70mm
Prior to welding, Mr. Plumb was observed preheating the weld to over 350° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. The welder was using 4.0mm diameter electrode (E7018-1 HR4) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding process in use was the Shielded Metal Arc Welding process (SMAW). The welding parameters were verified by ABF QC Inspector Bernie Docena with a Fluke 337 current Clampmeter and preheat was verified with temperature indicators. The QC Inspector performed welding parameters verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

Diaphragm Repair
ABF-RFI-003457R00
RWR-201306-002
ESW E-043, Location “Q”-Face B:
The QA Inspector observed ABF welding personnel Kit Lai (WID-2953) performing Flux Cored Arc Welding on diaphragm plate at the 9m location adjacent to ESW “Q” Face B. The work is being performed per approved RFI 003457R00 and Request for Weld Repair (RWR) 201306-002. The weld joint detail is TC-P4-GF with a single bevel grove angle of 45° and 37mm PJP to be welded. Prior to welding ABF QC had set welding parameters on the FCAW welding unit. Mr. Lai was observed preheating the weld to over 350° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. The welder was using .052 diameter electrode (E71T-1M) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-3160-Repair Rev.1. The QA Inspector also verified welding parameters with a Fluke 337 current Clampmeter at 238 amps and 24 volts with a preheat of 350° Fahrenheit. After initial root pass had cooled ABF QC Inspector Bernie Docena performed Magnetic Particle Testing of the root pass and did not observe any relevant indications. Mr. Docena also performed welding parameters verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.



WELDING INSPECTION REPORT

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Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer